

REMARKS

Claims 1-67 and 69-91 are pending in the present invention. Claims 1-62 have been withdrawn from consideration as drawn to a non-elected invention. Claims 63, 66, 67, and 72-91 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Krejcik, U.S. Patent No. 6,478,662, in view of Nelson et al., U.S. Patent No. 6,088,895. Claims 69-71 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Krejcik and Nelson et al. in further view of Barrier et al., U.S. Patent No. 6,126,516 and a section of the specification of the present application. The applicant respectfully traverses the rejections and requests reconsideration thereof in light of the following remarks.

Concerning claims 64 and 65, it is respectfully pointed out that no specific ground for the rejection has been cited in the Office Action. The applicant believes that this oversight is moot in view of the arguments presented below.

Turning now to the merits, the present application is for a continuous method of descaling a layer of scale on an advancing metal surface without the use of caustic materials, the method comprising advancing a metal surface along a predetermined path of travel; cracking the layer of scale by spraying smooth-edged media under fluid pressure at the surface of advancing metal; and abrading the cracked layer of scale to remove the scale, thereby forming a descaled metal surface.

The Krejcik patent is, by contrast, for a descaler/finisher in which airless blasting is used to provide a surface treatment to a metal wire, rod, or pipe. As noted in the specification of Krejcik at, for instance, column 1, lines 50-55, the media are mechanically projected or flung at the surface of the wire, rod, or pipe using blast wheels.

It is respectfully submitted that Krejcik fails to teach that for which it is cited, and that neither Nelson et al. nor any of the other references compensates for this failure. Specifically, claim 63 of the present application recites that the media are sprayed "under fluid pressure." Because Krejcik uses a mechanical means for projecting the media—blast wheels—Krejcik cannot be reasonably read to teach a method in which the media are sprayed under fluid pressure. Simply put, Krejcik does not teach the spraying of the media but the mechanical projection of the media.

This difference is at its most stark in dependent claim 74, which recites that "said cracking step comprises spraying a fan shaped jet of said media." Krejcik is wholly incapable of spraying a fan shaped jet of the media, because centrifugal blast wheels are not configured to spray media at all, much less in a fan shaped jet.

The differences between the method of the present invention and Krejcik are particularly significant when viewed in light of the Krejcik disclosure. The airless blasting method of Krejcik operates at substantially lower media velocity than the present invention, a characteristic that manifests itself in the relatively small cross-sectional area of the blast zone (col. 6, lines 18-20). This in turn makes the method of Krejcik suitable only for stock material having a small cross-sectional area (col. 3, lines 47-51) and primarily only for stock material having a substantially circular, or at least comparatively narrow, cross-section, such as wire, pipe, or rod (col. 3, lines 27-46). By contrast, the present invention operates at a pressure that is between three and ten times higher, which in turn allows the descaling of metal of substantially any profile.

It is respectfully submitted that Krejcik's teaching of the use of centrifugal blast wheels fails to meet the recitation of spraying "under fluid pressure" as in claim 63, and that neither Nelson et al. nor Barrier et al. cure this deficiency. At column 4, lines 54-58, Nelson et al.

specifically teach away from the use of fluid pressure to project the media at the surface to be cleaned. The system of Barrier et al. likewise uses a mechanical projection means analogous to the blast wheels of Krejcik to deliver the media to the surface to be cleaned. Although Barrier et al. discusses the "fluidization" of the media at column 4, lines 57-65, this fluidization is conducted to minimize damage to the media resulting from impact with the primary projection means, namely the blades (no. 20), and bears no relation to the acceleration of the media toward the surface.

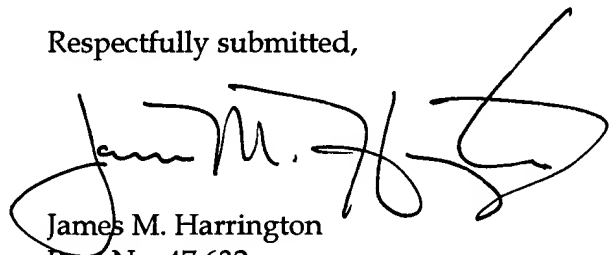
Consequently, it is also respectfully submitted that claim 63 and its dependencies, claims 64-67 and 69-91, are allowable.

CONCLUSION

In consideration of all the foregoing, it is respectfully submitted that the application is in condition for allowance. Reconsideration of the rejections in light of the remarks herein, an early indication of allowability, and passage to issuance are earnestly solicited.

The Office is invited to contact the undersigned attorney for the applicant by telephone to resolve any outstanding issues.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James M. Harrington", with a large, stylized flourish extending from the end of the signature.

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